

**What Is Claimed Is:**

1. A first coreless type linear motor comprising a first rotor and a first stator,

wherein said first stator comprises a first pair of parallel guide plates made of ferromagnetic material and a first plurality of permanent magnets are pasted on every said first guide plates;

wherein said first rotor comprises a first plate and a first plurality of coils, said first plate and said first coils keeping at a middle of said first pair of guide plates, said first permanent magnets on said first guide plates neighboring with said first plate; wherein a first plurality of coil troughs are set on said first plate, said first coils being buried in said first coil troughs, said first coils being made by winding conductive wires and a first plurality of heat holes are formed at a center of said first coils, said first heat holes connecting to outside of said first plate to make heat of said first coils transmit into air through said heat holes.

2. A second coreless type linear motor comprising a second rotor and a second stator,

wherein said second stator comprises a second pair of parallel guide plates made of ferromagnetic material and a second plurality of permanent magnets are pasted on every said second guide plates;

wherein said second rotor comprises a second plate and a second plurality of coils, said second plate and said second coils keeping at a middle of said second pair of guide plates, said second permanent magnets on said second guide plates neighboring with said second plate;

wherein a second plurality of coil troughs are set on said second plate, said second coils being buried in said second coil troughs, said second coils being made by winding conductive wires and a second plurality heat holes are formed at a center of said second coils, a heat sink compound being filled into said second heat holes

after said second coils are buried into said second coil troughs to make heat of said second coils transit into air easily and make said second plate have good strength.

3. A coreless type linear motor as recited in claim 2, wherein a plurality of heat pipes are buried into said second heat holes.

5 4. A coreless type linear motor as recited in claim 3, wherein said heat pipes are connected to a heat sink to help dissipate heat.

5. A coreless type linear motor as recited in claim 2, wherein a contact surface between said heat sink compound and air has a plurality of ragged strips to increase thermal conduction effect.

10 6. A coreless type linear motor as recited in claim 1, a plurality of heat dissipation holes are set near said first and second coils of said first and second plate.

7. A coreless type linear motor as recited in claim 6, wherein said heat sink compound is filling into said heat dissipation holes to increase the strength of plates.

15 8. A coreless type linear motor as recited in claim 2, a plurality of heat dissipation holes are set near said first and second coils of said first and second plate.

9. A coreless type linear motor as recited in claim 8, wherein said heat sink compound is filling into said heat dissipation holes to increase the strength of plates.

20 10. A coreless type linear motor as recited in claim 1, wherein said heat sink compound is filling among conductive wires of said first and second coils to make heat of conductive wires of said first and second coils be conducted easily.

11. A coreless type linear motor as recited in claim 2, wherein said heat sink compound is filling among conductive wires of said first and second coils to make heat of conductive wires of said first and second coils be conducted easily.